# Protecting Outdoor Workers from Ticks

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The findings and conclusions in this presentation have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.

## What is NIOSH? Is it the same as OSHA?

NIOSH (National Institute for Occupational Safety & Health)	OSHA (Occupational Safety & Health Administration)	
Dept. of Health & Human Services (DHHS) Centers for Diseases Control & Prevention (CDC)	Dept. of Labor (DOL)	
Research Agency	Regulatory Agency	
Provide Recommendations	Provide & Enforce Standards	

### **NIOSH Services**

### **NIOSH Topic Pages:**

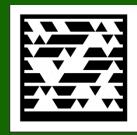
Occupational safety & health info arranged by subject.

### **Health Hazard Evaluation Program:**

Investigates potentially hazardous working conditions when requested by employers or employees at no cost.

#### **NIOSH Publications:**

FREE documents & brochures available online or mailed.



#### **Databases:**

Ex. Pocket Guide to Chemical Hazards, etc.

#### **CDC Info:**

Ask questions and get answers.



- Provide workers with training.
  - Tick-borne Diseases
  - Transmission
  - Symptoms
  - Prevention

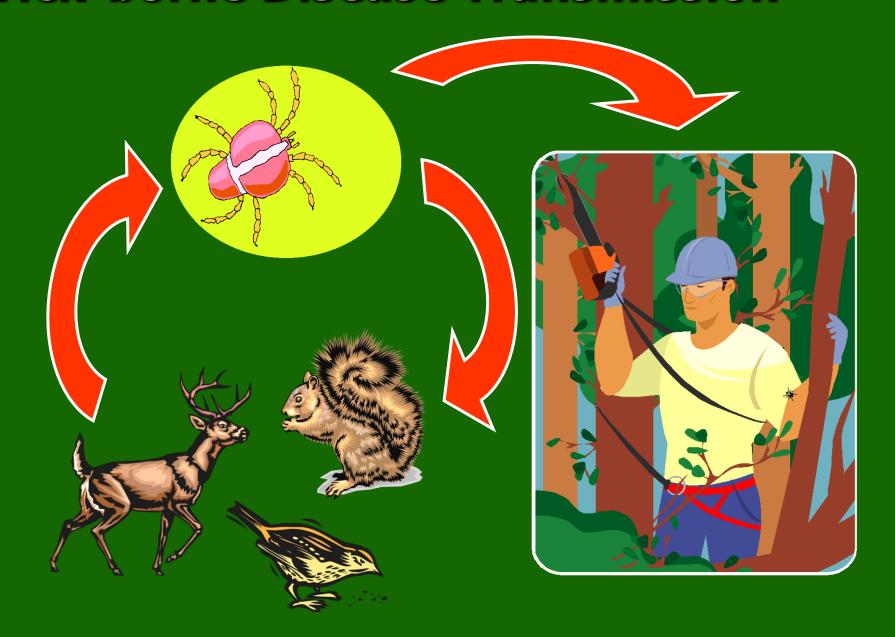


Encourage symptoms & illness reporting.

### **Tick-borne Diseases**

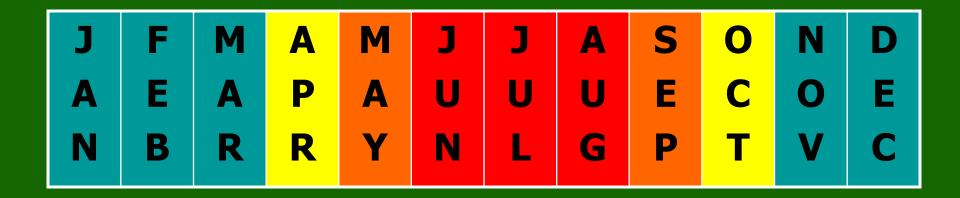
Lyme Disease	Babesiosis	Ehrlichiosis
Rocky Mtn. Spotted Fever	Southern Tick-Associated Rash Illness	
Tick-borne Relapsing Fever	Anaplasmosis	Colorado Tick Fever
Powassan Encephalitis	Q Fever	Tularemia

### **Tick-borne Disease Transmission**



## When Are Workers at Highest Risk?

### **Warmer Months**



## **Common Symptoms of Tick-borne Diseases**

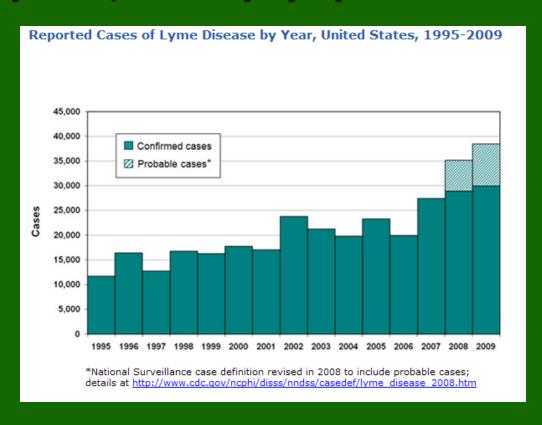
- Fever
- Fatigue
- Headache
- Joint pain
- Body/muscle aches
- Rash



Lyme Disease Rash

### **Symptoms & Illness Reporting**

- Show workers National & State data on Lyme Disease.
- Encourage workers to report finding ticks, being bitten by ticks, and any symptoms of illness.



- Eliminate natural conditions that attract ticks to worker areas.
  - Remove leaf litter.
  - Keep grass mowed short.
  - Set rodent traps or poisons & properly store food.
  - Discourage deer with barriers.

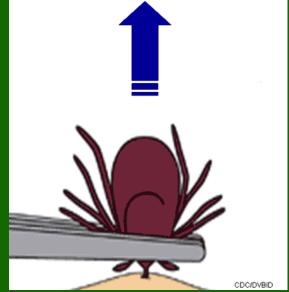


- Discuss or provide proper clothing.
  - Long sleeves & long pants.
  - Tuck pants into socks or boots.
  - Light-colored clothing for easy tick spotting.
- Provide workers with repellent.
  - Products containing > 20% DEET for skin.
  - Permethrin for clothing.

- Provide instructions for appropriate ways to check for and remove ticks.
  - Check skin & clothes daily for ticks.
  - When washing & drying clothes, use the 'Hot' setting on the dryer to kill ticks.
  - If a tick is attached to the skin, only use appropriate removal techniques.

### **Proper Tick Removal**

- Remove the tick as soon as you notice it.
- Use fine-tipped tweezers to firmly grasp the tick very close to your skin.
  - Avoid crushing the tick's body.
- With a steady motion, pull the tick's body away from your skin.
  - Do not be alarmed if the tick's mouthparts remain in the skin, the tick can no longer transmit bacteria.
- Clean your skin with soap & warm H<sub>2</sub>O or alcohol.



**DO NOT** use petroleum jelly, a hot match, nail polish, or other products to remove a tick.



### **NIOSH Fast Facts**



Protecting Yourself from

#### **Ticks and Mosquitoes**

Outdoor workers may be exposed to vector-borne diseases spread from the bates of infected ticks and mosquitoes. Ticks and mosquitoes may carry bacteria, parasites or viruses.

One of the most common tick-borne diseases in the U.S. is Lyme disease. Ticks are found in wooded areas, high grass, or leaf litter. They are most active during the spring, summer and fall, but in warmer areas may be active all year round.

One of the most common diseases carried by mosquitoes in the U.S. is West Nile views infection. Mosquitoes may be found near standing water, or in weedy or wooded areas. They are usually most active during dawn and dusk in the warmer months.

#### Symptoms of Vector-borne Diseases

- · Body/muscle aches
- · foint pain
- Fever
   Headaches
- . Stiff neck
- · Futigor :
- + Rash
- Paralysis

#### Workplace Controls

#### Decrease tick populations:

- · Remove leaf litter.
- . Remove, mose, or cut back tall grass and brush.
- · Discourage deer activity.

Eliminate standing water to decrease mosquito populations:

- . Remove, turn over, cover, or store equipment.
- . Remove debris from disches.
- . Fill in areas that collect standing water.
- Place drain boles in containers that collect water and cannot be discarded.



### **NIOSH Topic Pages**

#### NIOSH Workplace Safety and Health Topics

#### Workplace Safety and Health Topics

Industries & Occupations

Hazards & Exposures

Diseases & Injuries

▶ Tick-Borne Diseases

Safety & Prevention

Chemicals

Emergency Preparedness & Response

NIOSH > Workplace Safety and Health Topics > Diseases & Injuries

#### TICK-BORNE DISEASES







#### Hazards to Outdoor Workers

Physical Hazards

Heat Stress

Cold Stress

UV Radiation

Biological Hazards

Insects and Scorpions

Poisonous Plants

Venomous Spiders

Venomous Snakes

Vector-Borne Diseases

West Nile Virus

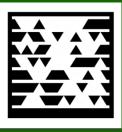
#### Overview

Tick-borne pathogens can be passed to humans by the bite of infected ticks. Ticks can be infected with bacteria, viruses, or parasites. Some of the most common tick-borne diseases in the United States include: Lyme disease, babesiosis, ehrlichiosis, Rocky Mountain Spotted Fever, anaplasmosis, Southern Tick-Associated Rash Illness, Tick-Borne Relapsing Fever, and tularemia. Other tick-borne diseases in the United States include: Colorado tick fever, Powassan encephalitis, and Q fever. Lyme disease is the most commonly reported tick-borne disease in the United States. In 2008, nearly 29,000 confirmed cases of Lyme disease were reported to the Centers for Disease Control and Prevention (CDC).

Outdoor workers are at risk of exposure to tick-borne diseases if they work at sites with ticks. Worksites with woods, bushes, high grass, or leaf litter are likely to have more ticks. Outdoor workers in most regions of the United States should be extra careful to

#### On this Page

- Overview
- Frequently Asked Questions
- Recommendations for Employers
- Recommendations for Workers
- CDC Resources
- . Other Resources
- State and University Resources
- NIOSH Related Publications



http://www.cdc.gov/niosh/topics/tick-borne/

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#### NIOSH Workplace Safety and Health Topics

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Hazards & Exposures

Diseases & Injuries

#### ▶Lyme Disease

Safety & Prevention

Chemicals

Emergency Preparedness & Response NIOSH > Workplace Safety and Health Topics > Diseases & Injuries

#### LYME DISEASE







Photos courtesy of CDC Public Health Image Library

#### Hazards to Outdoor Workers

Physical Hazards

Heat Stress

Cold Stress

UV Radiation

Biological Hazards

Insects and Scorpions

Poisonous Plants

Venomous Spiders

Venomous Snakes

Vector-Borne Diseases

West Nile Virus

Lyme Disease

#### Overview

Lyme disease is the most commonly reported tick-borne disease in the United States. In 2008, nearly 28,921 cases of Lyme disease were reported to the Centers for Disease Control and Prevention (CDC). Lyme disease is passed to humans by the bite of black-legged ticks (also known as deer ticks in the eastern United States) and western black-legged ticks infected with the bacterium Borrelia burgdorferi. The Lyme disease bacterium normally lives in mice, squirrels, and other small mammals.

Outdoor workers are at risk of Lyme disease if they work at sites with infected ticks. U.S. workers in the northeastern and north-central States are at highest risk of exposure to infected ticks (see map of U.S. cases of Lyme disease reported in 2008 below). Ticks may also transmit other tick-borne diseases to workers in these and other regions of the country. Worksites with woods, bushes, high grass, or leaf litter are likely to have more ticks. Outdoor workers should be extra careful to protect themselves in the late

#### On this Page

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- Recommendations for Employers
- Recommendations for Workers
- Symptoms
- · Diagnosis and Treatment
- · Workplace Resources
- CDC Resources
- NIOSH Related Publications
- NIOSH Related Safety and Health Topics



http://www.cdc.gov/niosh/topics/lyme/